



**ENGINEERING OPERATIONS COMMITTEE  
MEETING MINUTES  
JULY 1, 1999 - 9:00 A.M.  
EXECUTIVE CONFERENCE ROOM**

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Present: C. T. Maki G. D. Taylor J. D. Culp  
C. Roberts P. F. Miller T. E. Davies  
J. W. Reincke T. Fort M. Frankhouse  
S. Bower

Guest: C. Bleech J. Ruszkowski T. Myers

**PRESENTATION**

**Introduction to Cold-in-Place Bituminous Recycling - Daniel Murphy**

As a prelude to a field tour on July 21<sup>st</sup> in Ontario, the presentation focused on cold-in-place bituminous recycling as an efficient method of rehabilitating deteriorating asphalt pavements. We have not tried this process before, but several states experimented with it, especially on lower volume routes. It is a warm weather process that must be overlayed after at least ten days of curing and must be topped before winter.

There will be Michigan representatives attending the July 21<sup>st</sup> field tour/open house on the project in Ontario. The Bituminous Advisory Committee will review the process for any potential application or trial use on state routes.

**OLD BUSINESS**

**1. Approval of the Minutes of the June 3, 1999, Meeting - C. T. Maki**

Minutes of the June 3, 1999, meeting were approved as written.

**2. 2005 Standard Specification Book - J. Ruszkowski**

Judy reviewed a summary of issues pertaining to the proposed specification book. Committees will be formed by December 1999. Organization and format of the book will stay the same with minor changes only. We will use dual metric/English units. The final version of the new book will be written using the active voice. Attached to these minutes are examples of passive and active voice documents. The first is our Special Provision for Passive Cathodic Protection for PCI - Beam Ends, written in passive (Attachment 1) and active (Attachment 2) voice.

The second example is the concrete sidewalk specification from our *1996 Standard Specifications for Construction* (passive) and the same specification from the Kentucky and Alaska specifications books (active).

The recommendation is to rewrite the book in passive voice and then hire a consultant to rewrite it in the active voice.

## NEW BUSINESS

### 1. **Pavement Selection - US-131, 10 Mile Road to M-46 West, CS 41132/41133, JN 38209 - S. Bower/C. Bleech**

A Life Cycle Cost Analysis was performed on two pavement rehabilitation alternates, including a rubblize and bituminous overlay (Alternate 1) and an unbonded jointed plain concrete overlay (Alternate 2).

The Pavement Selection Review Committee reviewed the results and Alternate 2 having the lowest Equivalent Uniform Annual Cost was recommended for final approval by EOC.

Alternate 2 is approved. The pavement design and cost analysis are as follows:

160 mm	.....	Jointed Plain Concrete Pavement (4m Joint Spacing)
140-160 mm	.....	Jointed Plain Concrete Shoulder
25 mm	.....	Bond Breaker (Bit Mix 13A)
228 mm	.....	Existing Concrete
100 mm	.....	Underdrains
356 mm	.....	Existing Base/Subbase

Present Value Initial Construction Costs	.....	\$228,824/Directional Kilometer
Present Value Initial User Costs	.....	\$90,145/Directional Kilometer
Present Value Maintenance Costs	.....	\$27,689/Directional Kilometer

Equivalent Uniform Annual Cost	.....	\$20,863/Directional Kilometer
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### 2. **Michigan State University Report, *Pavement Marking Material Evaluation* - J. O'Doherty/T. Myers**

The research project objectives were to conduct a literature review of the state of the practice on pavement markings and to collect field data in support of establishing guidelines and criteria for selecting cost-effective pavement marking materials. Based on the results of this study, waterborne paints are the most cost-effective because they retain good retroreflectivity

levels, have reasonable durability, and are less costly than the other tested products (polyesters, thermoplastics, and tapes).

MDOT's current standard pavement marking material is waterborne paint. Editorial comments were noted.

**ACTION:** The research report is approved. The Traffic and Safety Division will coordinate editorial changes before publishing and distributing the final report.

3. **Michigan State University Report, *Grand River Avenue (M-43) Pedestrian Study*, RCE Contract 94-1521-Z12 - J. D. O'Doherty**

This item was tabled. The Traffic and Safety Division will resubmit this report with more details on project cost and the benefits derived.

(Signed Copy on File at C&T/Secondary)  
Jon W. Reincke, Secretary  
Engineering Operations Committee

JWR:kat

Attachments

cc: EOC Members  
Region Engineers

J. R. DeSana	R. J. Risser, Jr. (MCPA)	J. Murner (MRPA)	T. L. Nelson
R. J. Lippert, Jr.	A. C. Milo (MRBA)	J. Ruszkowski	R. D. Till
D. L. Smiley	J. Becsey (MAPA)	C. Libiran	M. Frierson
M. Nystrom (AUC)	D. Hollingsworth (MCA)	G. J. Bukoski	C. W. Whiteside
M. Newman (MAA)	J. Steele (FHWA)	K. Rothwell	M. P. Krause